

Winter '12 CIS 122 Assignment 5 – 120/100 points possible – Due Friday, 3-16, 11:59 PM

1. [25] Exercise 8.3 (p. 383). Write a program which first defines a dictionary with at least five (5) abbreviations common to texting (e.g., “ttyl” for “Talk to you later”) to translate between full text and abbreviations. Your program should also define two functions: one to translate from full text to an abbreviation and one to translate from an abbreviation to full text (i.e., both translation directions). You may use a separate dictionary for each direction of translation, if you’d like. Your translations should be case insensitive and ignore punctuation (e.g., “TTYL” and “tTYl!” should both be translated to “Talk to you later”). Your program should then prompt for input text and the direction of translation and then call the appropriate function, printing the returned string. Save your program as Assignment5-1.py.
2. [25] Exercise 8.10a (p. 384). Write a program which first implements the function described by the problem in the text. Do not use sets in your function implementation. Your program should then prompt the user for their first and last names (you may use either a single prompt with the input text broken into two words or two separate prompts). Your program should then call the function with the first and last names as arguments and print the returned list. Save your program as Assignment5-2.py.
3. [25] Exercise 8.10b (p. 384). Write a program which first implements the function described by the problem in the text. Do not use lists in your function implementation. Your program should then prompt the user for their first and last names like in problem 2 above. Your program should then call the function with the first and last names as arguments and print the returned set. Save your program as Assignment5-3.py.
4. [25] Exercise 8.25 (p. 386). Write a program which initializes an empty list and then prompts the user for a single word and keeps prompting for single words, adding each word to the list, until the user enters a single period character (i.e., ‘.’). Your program should then print all pairs of words which are anagrams. Your comparisons should be case insensitive (e.g., “Iceman” and “Cinema” are anagrams). You may (and probably want to) use a dictionary to simplify your implementation (as indicated by the hint in the text). You may define functions as you see fit. Save your program as Assignment5-4.py.
5. [+20] (extra credit) Exercise 8.2a (p. 383). As indicated by the problem in the text, write a program which prompts for an input string and an integer shift amount and prints the encrypted version of the input string. Note that the example in the text is the result of a shift by 2, not 4 as indicated. You may define functions as you see fit. Save your program as Assignment5-5.py.

Upload your .py files to Blackboard.